

Appl. No. 10/800,450
Amdt. Dated August 5, 2005
Reply to Office action of February 8, 2005

REMARKS/ARGUMENTS

Applicants would like to thank the Examiner for the careful consideration given the present application. Reconsideration of the application is respectfully requested in view of the remarks provided herein.

Claims 1-2 and 4 were rejected under 35 U.S.C. 102(e) as being anticipated by Biasse et al. (U.S. Patent No. 5,993,677). Traversal of this rejection is made for at least the following reasons. Biasse et al. does not disclose molecular bonding of a silicon block on a support, as recited in claim 1. The Examiner relies on the handle substrate 120 and the final substrate 132 of Biasse et al. as being equivalent to the claimed silicon block and support, respectively. However, the relied upon handle substrate 120 is not molecularly bonded to the relied upon final substrate 132, as required by claim 1. In contrast, Biasse et al. discloses that a thin film 112 is joined to the handle substrate 120, an initial substrate is eliminated, and the thin film 112 is then joined with the final substrate 132. The joining of the layers is done by one of an adhesive sticking with glue or a direct sticking. Direct sticking involves polishing and/or cleaning followed by an annealing process. Neither of these sticking methods is, or can be considered equivalent to, molecular bonding.

Further, Biasse et al. fails to disclose thinning or respectively thickening the surface layer until a thickness substantially equal to a determined thickness, as recited in claim 1. The determined thickness relates to the desired thickness of a silicon layer formed on the support for optical purposes. The Examiner relies on the superficial film 124 of Biasse et al. as being equivalent to the claimed surface layer. The Examiner then relies on Col. 5, lines 9-11 as disclosing the claimed limitation of thinning the surface layer until a thickness is obtained that is substantially equal to the determined thickness. However, Col. 5, lines 9-11 clearly state that an etching process is utilized to eliminate the superficial film 124 remaining on the thin film. Eliminating the film layer is not equivalent to thinning the layer to a determined thickness. If the determined thickness were zero, the process would not result in the desired silicon layer.

Further still, Biasse et al. does not disclose forming a silicon layer for optical purposes with a determined thickness on a support. Instead, Biasse et al. merely discloses a process for transferring a thin film from an initial substrate onto a final substrate. The thin film transfer process of Biasse et al. is employed in fabrication of micro-electronic appliances. Forming a silicon layer with a predetermined thickness for optical purposes is absent from Biasse et al.

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Because Biasse et al. does not disclose each and every limitation set forth in independent claim 1, Biasse et al. cannot anticipate such claim, or claims 2-15, which depend therefrom. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Biasse et al. (U.S. Patent No. 5,993,677) in view of Ohmura et al. (U.S. Patent No. 4,848,272). Traversal of this rejection is made for at least the following reasons. Claim 3 depends from claim 1, which is believed to be allowable over Biasse et al. for the reasons discussed above. Ohmura et al. does not make up for the deficiencies of Biasse et al. Ohmura et al. merely discloses an apparatus for forming thin films such as a barrel type epitaxial growth apparatus. Accordingly, the combination of Biasse et al. and Ohmura et al. do not teach or suggest each and every limitation set forth in claim 3. Withdrawal of this rejection is respectfully requested.

Claims 5-15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ramdani et al. (U.S. Patent No. 5,835,521) in view of Biasse et al. (U.S. Patent No. 5,993,677). Traversal of this rejection is made for at least the following reasons. The Examiner concedes that Ramdani et al. fails to teach the formation of silicon layer, namely bonding a silicon block with a support, cleaving the silicon block and thinning the surface layer to a desired thickness. Accordingly, the Examiner relies on Biasse et al. in an attempt to make up for the deficiencies of Ramdani et al. However, as discussed above, thinning the surface layer to a desired thickness is also absent from Biasse et al. In contrast, Biasse et al. discloses eliminating the surface layer via etching, thereby rendering the process unsuitable for its intended purpose. For at least these reasons, the combination of Ramdani et al. and Biasse et al. fail to teach or suggest each and every limitation set forth in claims 5-15. Withdrawal of this rejection is respectfully requested.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

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If there are any additional fees resulting from this communication, please charge same
to our Deposit Account No. 16-0820, our Order No. 33019US1.

Respectfully submitted,
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